

Brazing for HVAC: Advanced Differential Metal Brazing



Brazing copper versus brazing different metals involves distinct considerations due to the unique properties of copper.

When brazing copper, the process benefits from copper's excellent thermal conductivity, which ensures even heat distribution and a strong bond. The filler metal typically used, such as a copper-phosphorus alloy, flows smoothly and forms a strong joint without requiring flux.

In contrast, brazing different metals, such as copper to stainless steel or aluminum, presents additional challenges. These metals may have varying melting points, thermal conductivities, and coefficients of thermal expansion, necessitating the use of specialized filler metals and fluxes to achieve a successful bond. The process requires careful temperature control and sometimes pre- or post-heating treatments to manage stresses and prevent joint failure due to the differing thermal behaviors of the metals involved.

Prerequisite: NTT's Brazing for Copper

WHAT THIS COURSE COVERS

- Heat Impact
- Metallurgical Factors in Joining Dissimilar Metals

COURSE OUTCOMES

- Understand Guidelines to Select the Most Suitable Process for Joining Dissimilar Metal Components in Air Conditioning and Refrigeration System.
- Demonstrate Brazing Dissimilar M, Proper Procedures for Flaring, Swaging and Leak Testing Techniques.

WHO SHOULD TAKE THIS

- HVAC Maintenance and Repair Technicians
- Facility Maintenance Technicians
- Apprentice and Experienced HVAC Technicians
- Stationary Engineers

COURSE AGENDA

- Heat Impact on Metals
- Heat Impact on Brazing
- Metallurgical Factors in Joining Dissimilar Metals
- Hands-on Dissimilar Metal Brazing

Lecture Hands-on • **ONSITE:** 1-days (8 hours)) • **LIVE ONLINE:** N/A



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